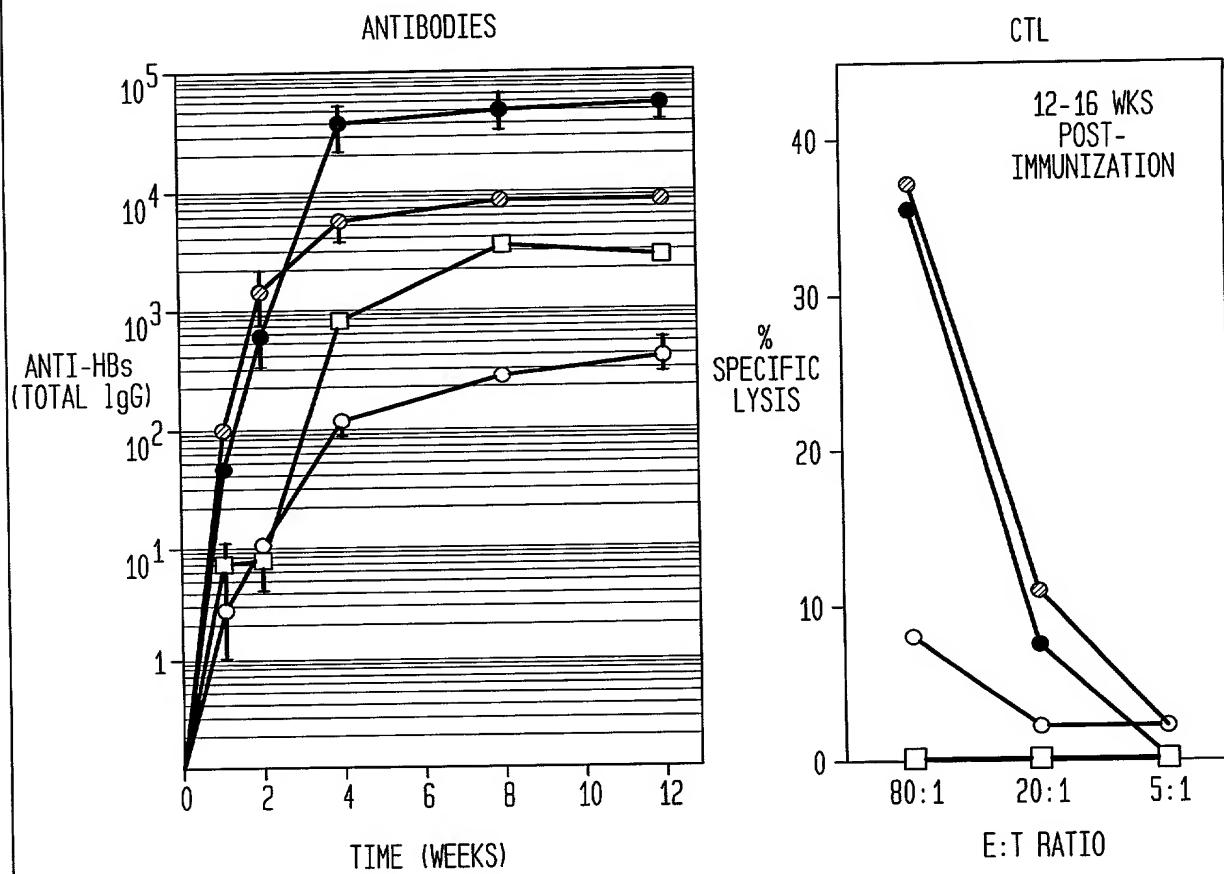
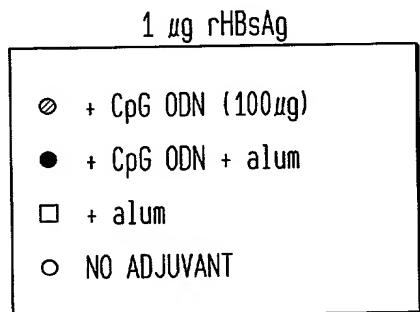


FIG. 1

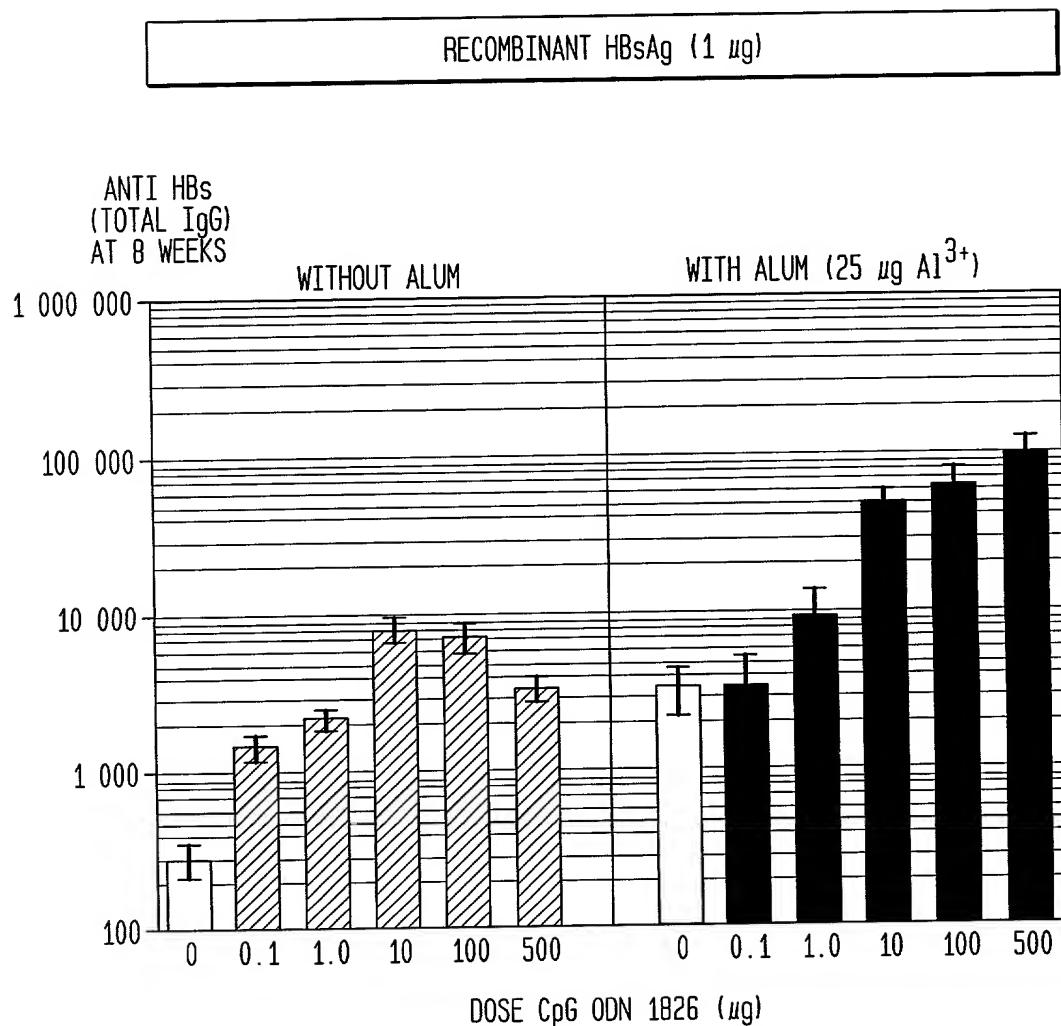
CpG ODN, ALONE OR COMBINED WITH ALUM  
AUGMENT HBsAg-SPECIFIC HUMORAL AND CTL RESPONSES  
IN ADULT BALB/c MICE



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**FIG. 2**

IMMUNOSTIMULATORY CpG ODN AS AN ADJUVANT FOR  
HBV VACCINE: EFFECT OF DOSE IN BALB/c MICE



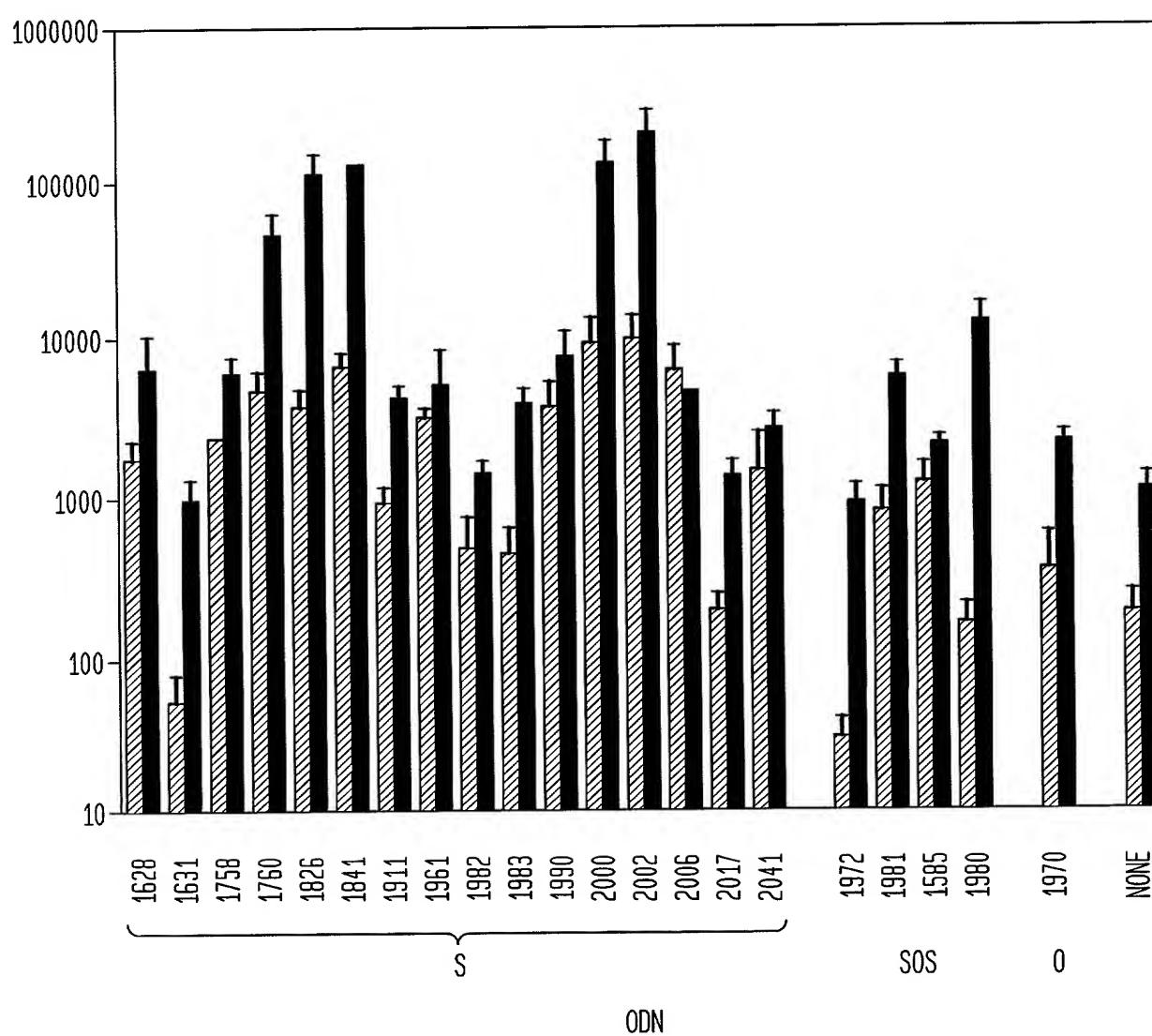
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FIG. 3

HUMORAL RESPONSES AGAINST HBsAg IN BALB/c MICE WITH  
DIFFERENT CpG ODN 1  $\mu$ g rHBsAg + 10 ODN



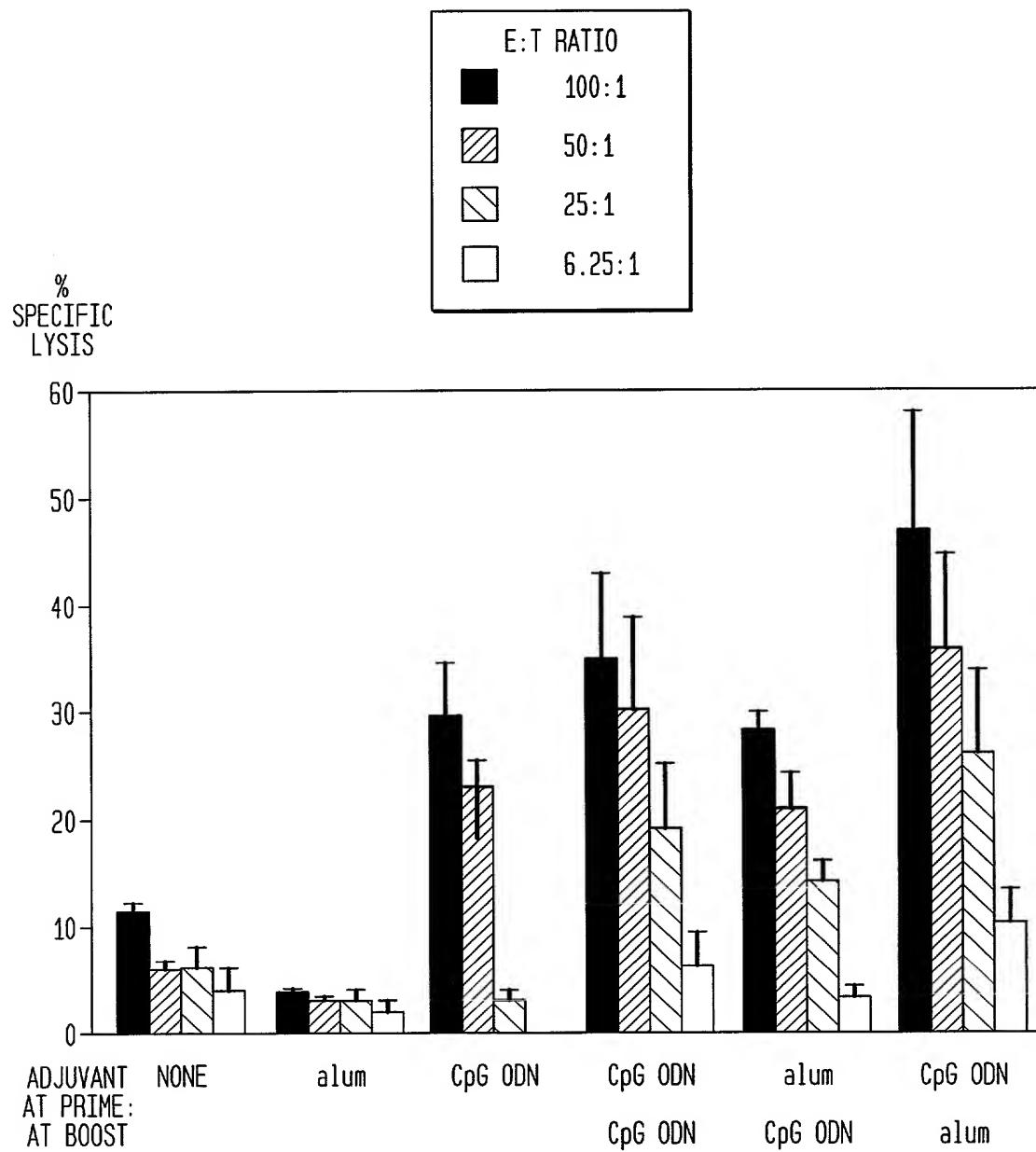
ANTI-HBs TITERS  
(TOTAL IgG)  
AT 4 WKS



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**FIG. 4**

CTL RESPONSES IN BALB/c MICE WITH CpG ODN AND/OR  
ALUM AS ADJUVANT IN PRIME-BOOST STRATEGIES



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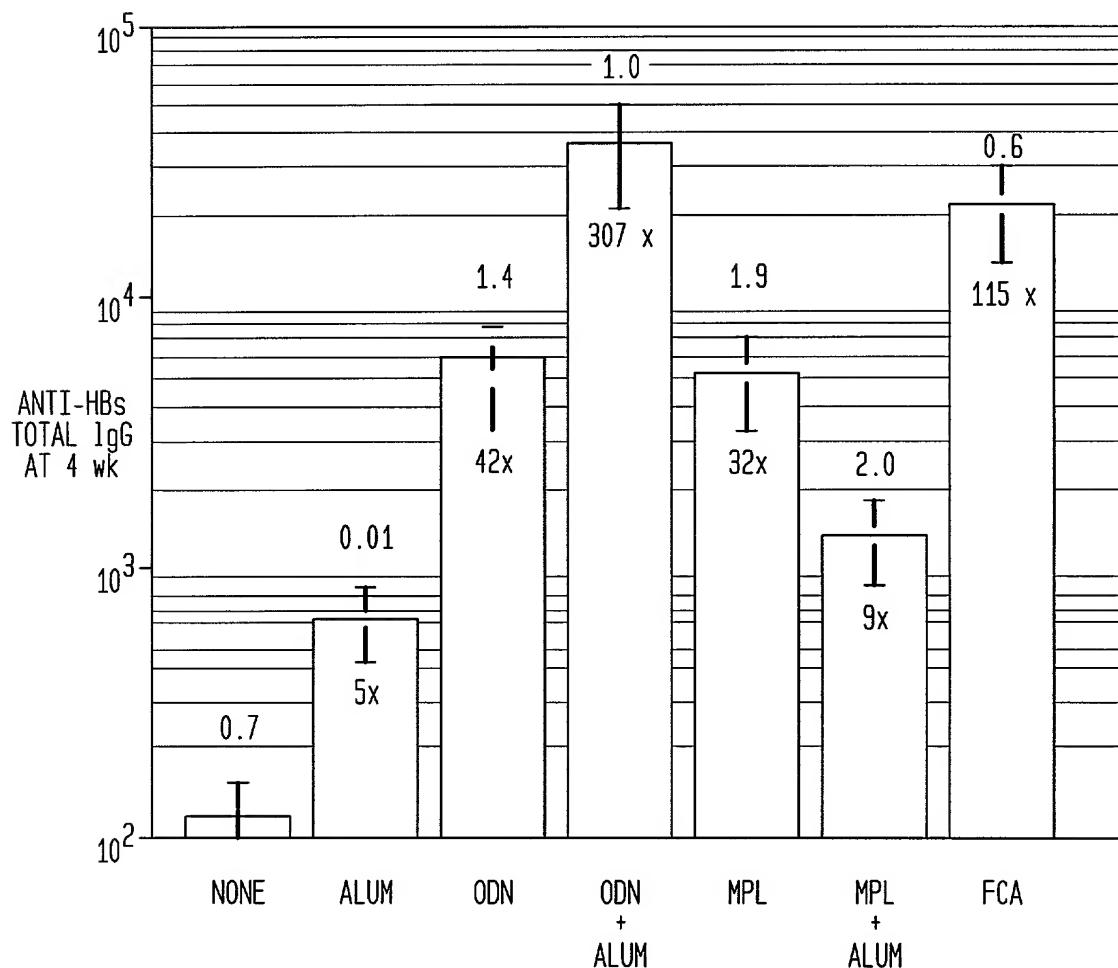
**FIG. 5**

COMPARISON OF DIFFERENT ADJUVANTS FOR IMMUNIZATION  
OF BALB/c MICE AGAINST rHBsAg

HBsAg (1 $\mu$ g) +	
ALUM	25 $\mu$ g
CpG ODN	10 $\mu$ g
MPL	50 $\mu$ g
FCA	1:1 v/v

NUMBERS ABOVE BARS ARE RATIO  
OF IgG2a:IgG1 WHERE A NUMBER > 1  
INDICATES A Th1-TYPE RESPONSE

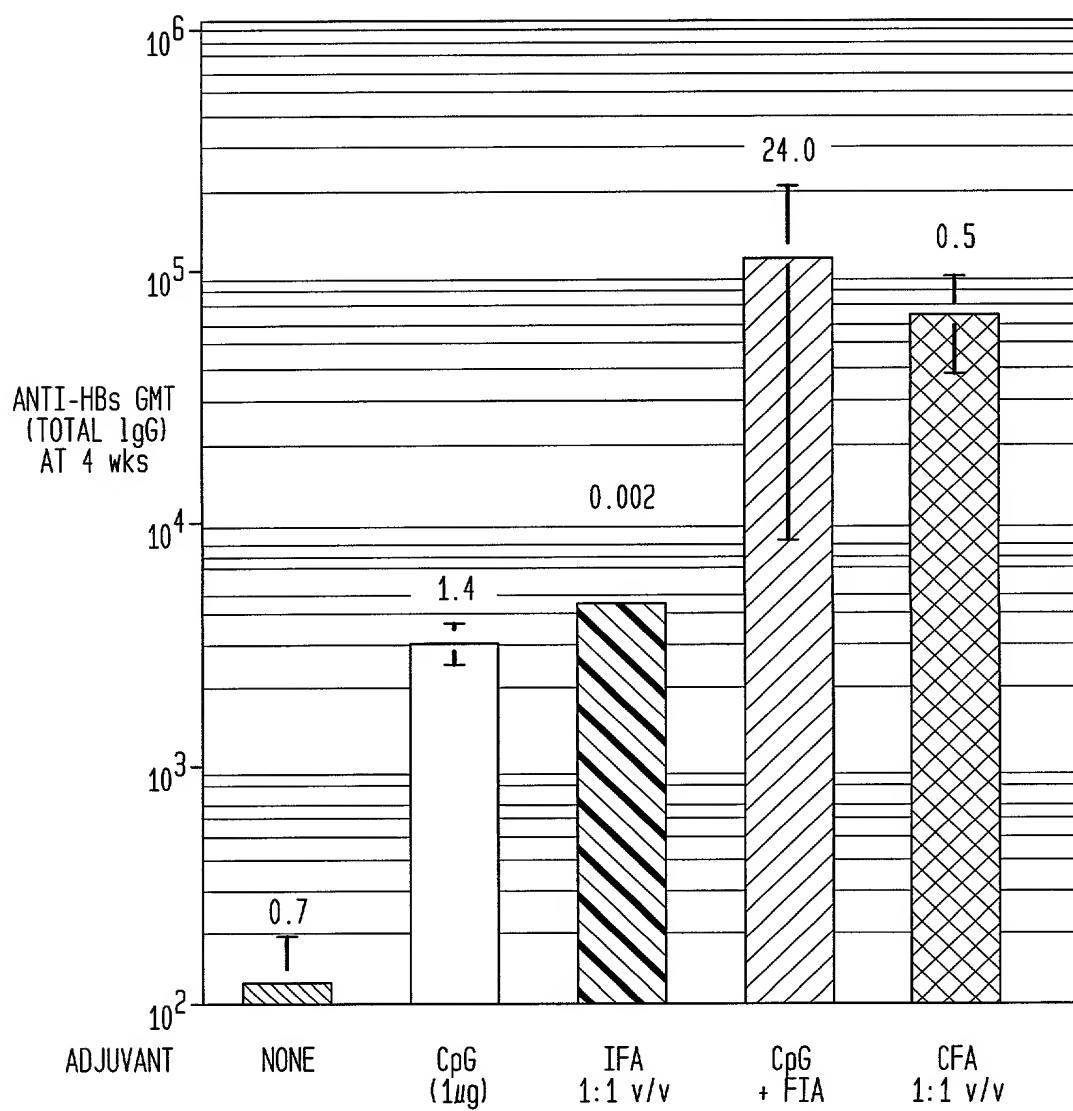
NUMBERS ON BARS ARE NUMBER-  
FOLD INCREASE OVER HBsAg  
ALONE FOR ANTI-HBs TOTAL IgG



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**FIG. 6**

1  $\mu$ g HBsAg IN BALB/c MICE

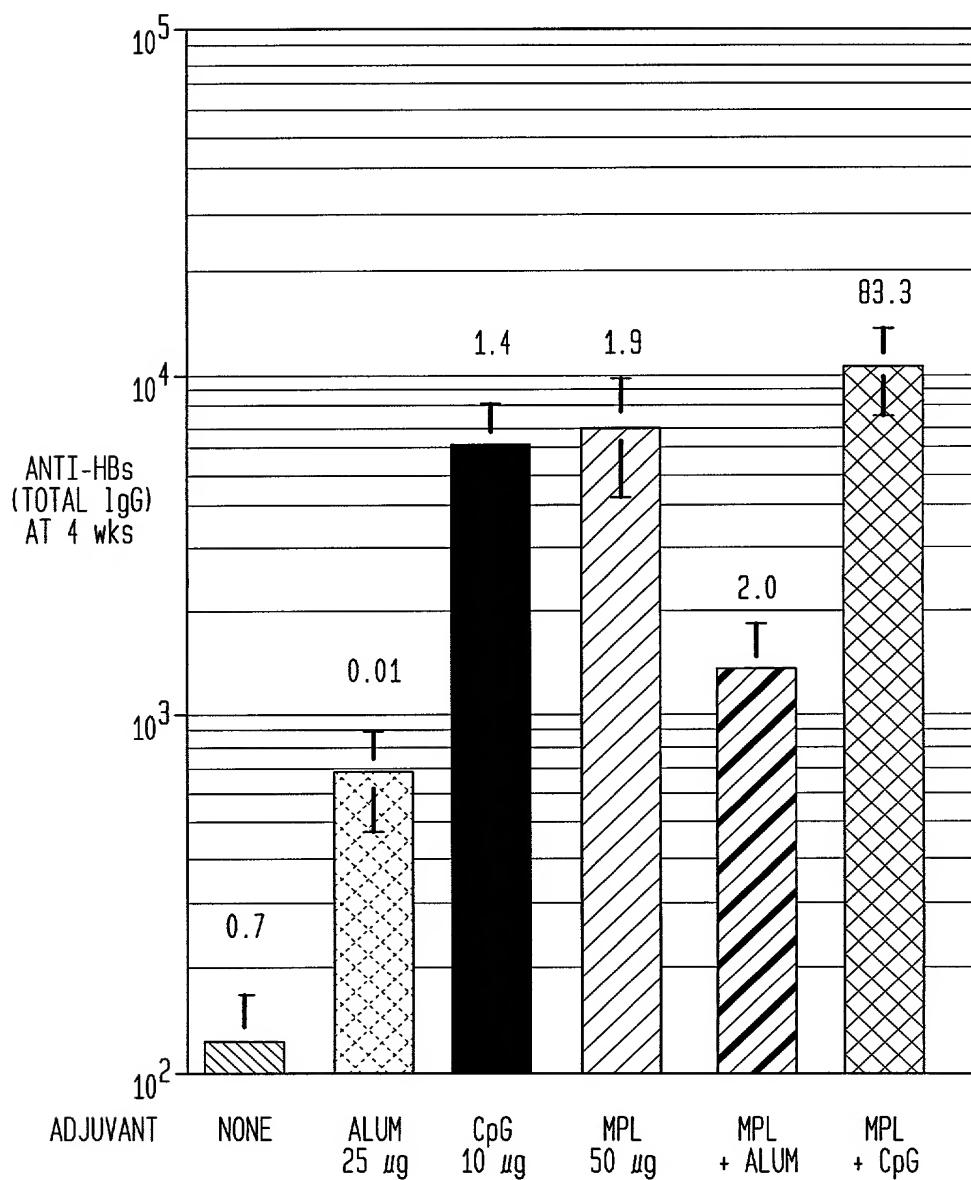


\* THE NUMBER ABOVE EACH BAR IS RATIO OF IgG2a/IgG1

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FIG. 7

1  $\mu$ g HBsAg IN BALB/c MICE

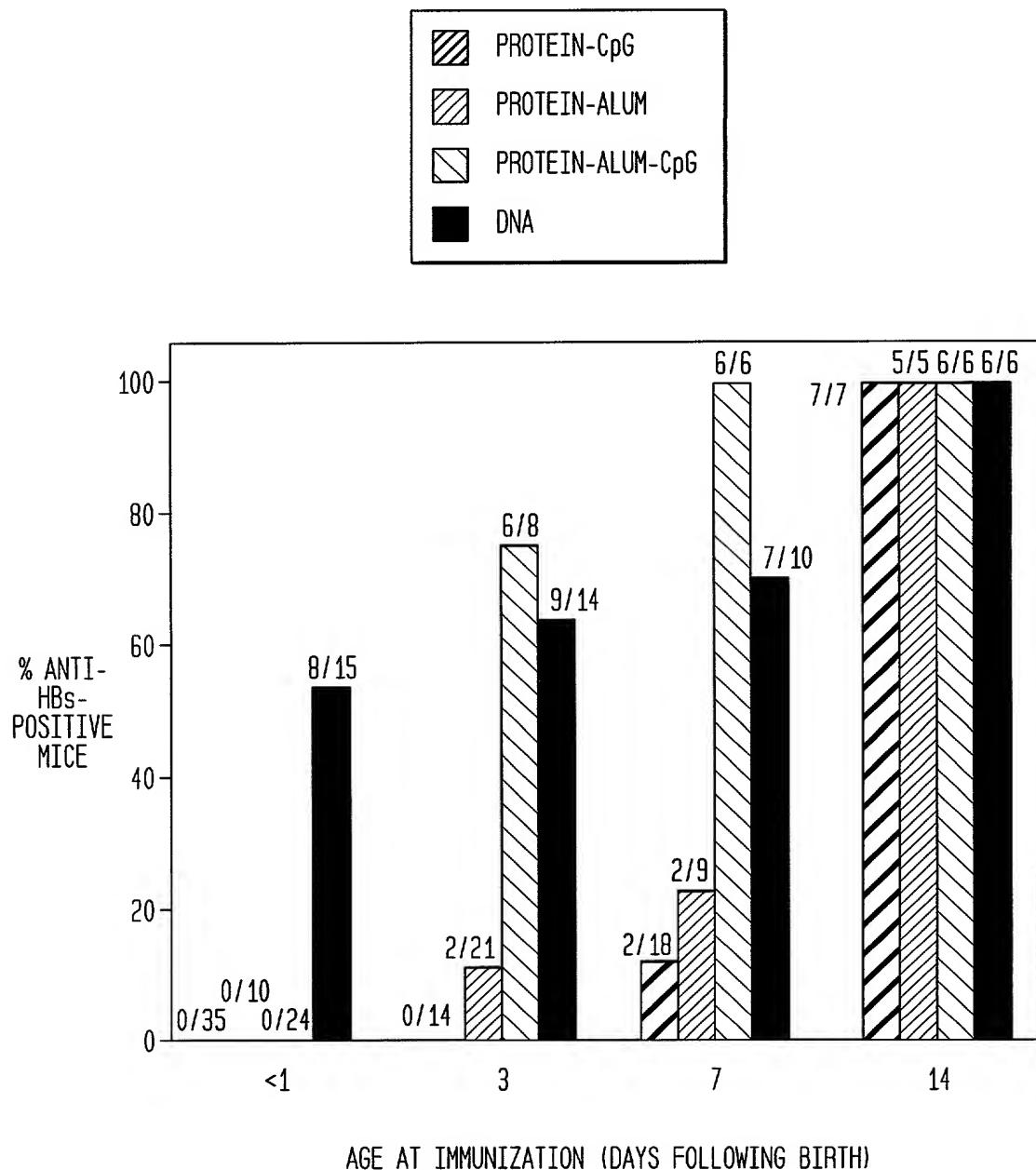


\* THE NUMBER ABOVE EACH BAR IS RATIO OF IgG2a/IgG1

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**FIG. 8**

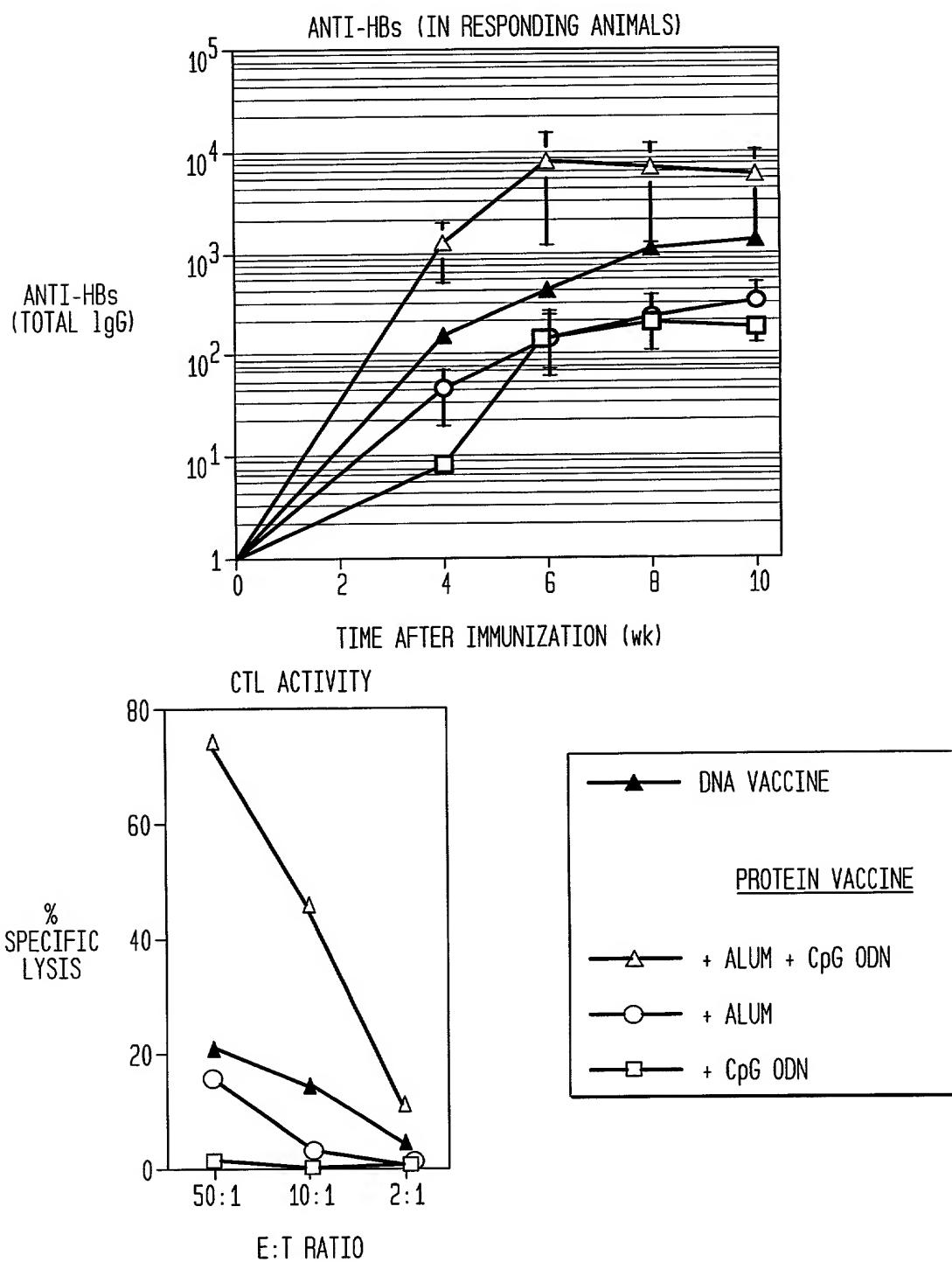
SEROCONVERSION IN NEONATAL MICE WITH  
DIFFERENT IMMUNIZATION STRATEGIES



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FIG. 9

IMMUNIZATION OF 7-DAY OLD BALB/c MICE AGAINST HBsAg  
DNA VS PROTEIN VACCINE AND EFFECT OF ADJUVANT

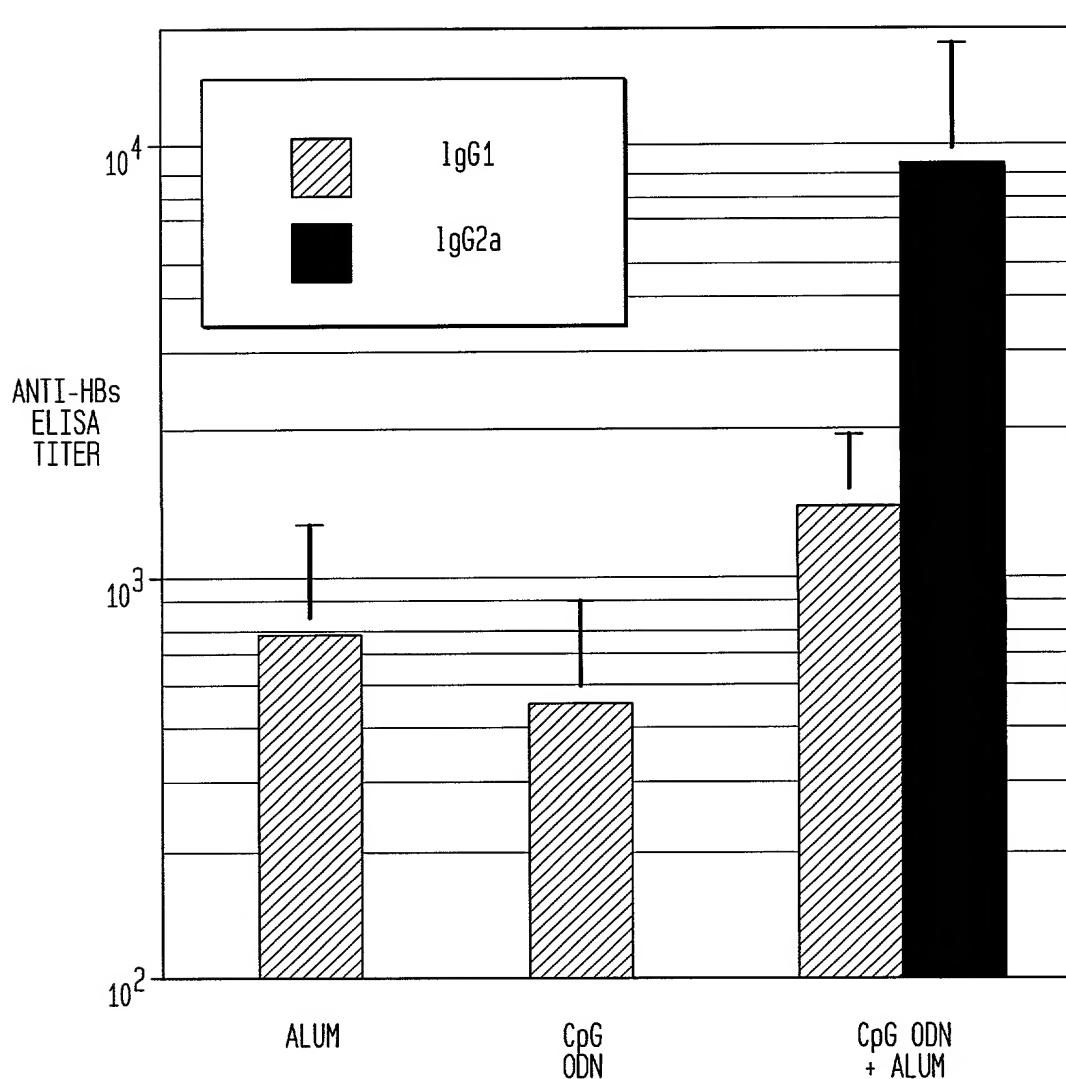


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FIG. 10

DNA VS PROTEIN IMMUNIZATION IN  
NEONATAL (7 DAY OLD) BALB/c MICE

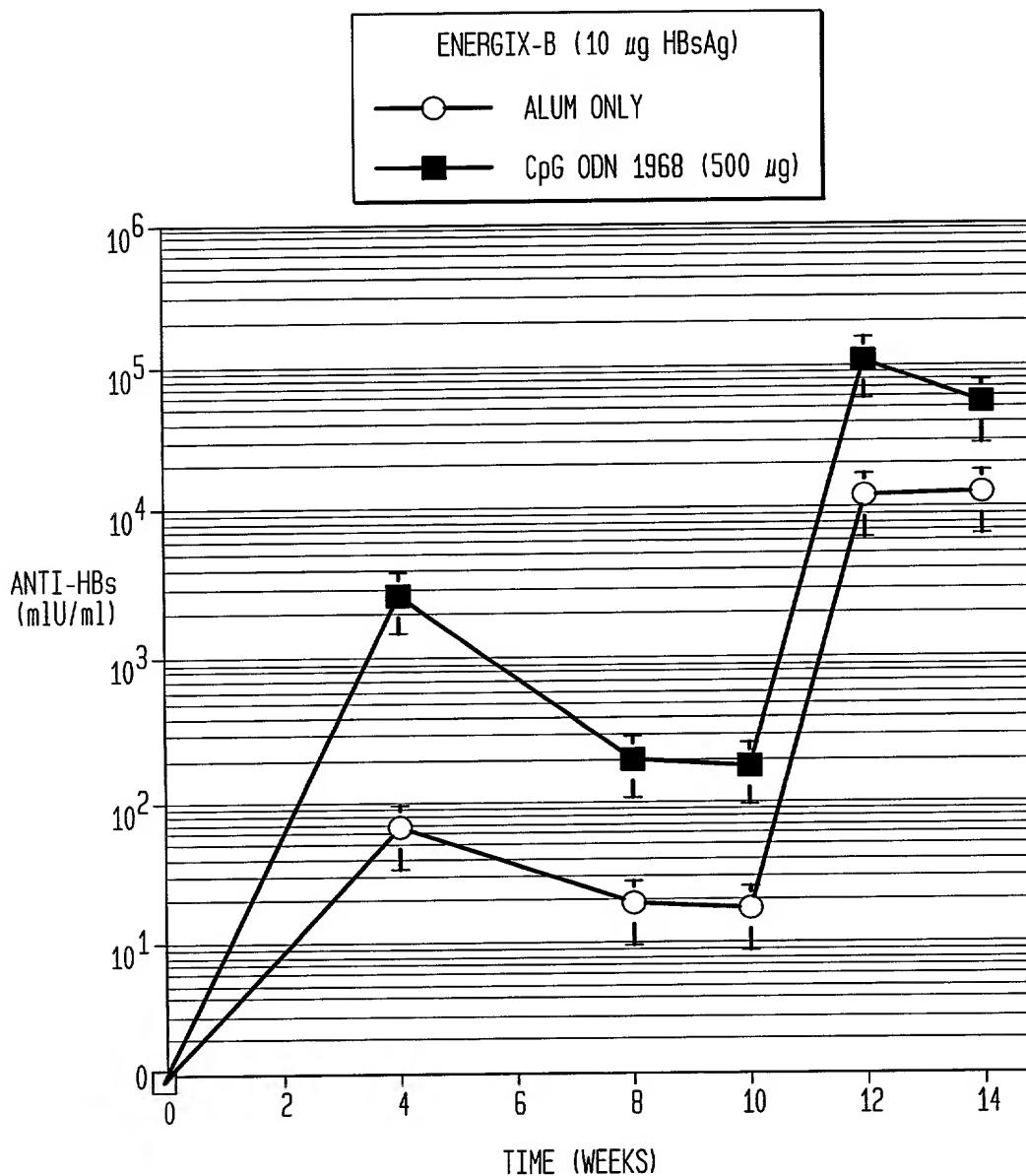
EFFECT OF ADJUVANT ON AB ISOTOPE



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FIG. 11

IMMUNIZATION OF CYNOLOGUS MONKEYS AGAINST HBsAg  
IMMUNOSTIMULATORY EFFECT OF CpG ODN WITH ENERGIX-B®



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FIG. 12

ANTI-HBs  
ANTIBODY  
(mIU/ml)

CpG DNA OVERCOMES HYPO-RESPONSIVENESS TO HBsAg IN ORANGUTANS

